Contents of Volume 5

NUMBER 1 JANUARY 1976

1 **Editorial**

Submitted Papers

2 **X-Ray Spectroscopic Study of some Cobalt Chalcogenides**
V.K. Kondawar and C. Mande

7 **Eine vereinfachte Formulierung des Korngrößeneinflusses**
K. Weber

13 **A Method of Producing Mounted Thin Windows for X-Ray Spectrometer Flow Counters**
G.D. Borley, G. Bullen and K. O'Hara

16 **A Comparative Study of Techniques for Quantitative Analysis of the X-Ray Spectra Obtained with a Si(Li) Detector**
P.J. Statham

29 **Determination of Yttrium and Niobium on Standard Silicate Rocks by X-Ray Fluorescence Analyses**
L. Leoni and M. Saitta

31 **A Practical Method for the Accurate Analysis of High Alloy Steels by X-Ray Emission**
V.E. Caldwell

36 **X-Ray Production as a Function of Depth for Low Electron Energies**
J.D. Brown and L. Parobek

41 **A Simple Method for Background and Matrix Correction of Spectral Peaks in Trace Element Determination by X-Ray Fluorescence Spectrometry**
C.E. Feather and J.P. Willis

49 **Über die Röntgenfluoreszenzanalyse von Aerosol-Präparaten**
H. Eberspächer und H. Schreiber

NUMBER 2 APRIL 1976

55 **Editorial**

Submitted Papers

56 **On Trace Element Analysis of Geological Samples by X-Ray Fluorescence**
W.B. Stern

61 **Folding of Aerosol Loaded Filters During X-Ray Fluorescence Analysis**
R.E. Van Grieken and F.C. Adams

68 **A System for Routine Analysis of Chlorine, Sulphur, Potassium and Calcium in Brine by X-Ray Fluorescence Spectrometry Applying Theoretical Matrix Corrections**
J.E. van den Enk, J.H. Janssen and W.K. de Jongh

73 **The Equivalent Wavelength Notion: Definition, Properties, Applications**
R. Tertian and R. Vié le Sage

84 **Determination of the X-Ray Mass Absorption Coefficient by Measurement of the Intensity of AgKα Compton Scattered Radiation**
M. Franzini, L. Leoni and M. Saitta

88 **Iterative Procedures in Electron Probe Analysis Corrections**
G. Springer

92 **Surface Deterioration of Ammonium Acid Phthalate Crystals**
D.M. Barrus, R.L. Blake and A.J. Burek

93 **Calibration and Use of a Lithium-drifted Silicon Detector for Accurate Analysis of X-Ray Spectra**
H.D. Keith and T.C. Loomis

104 **Spectral Distributions for X-Rays Produced by a General Electric EA75 Cr/W Tube at Various Applied Constant Voltages**
T.C. Loomis and H.D. Keith

115 **Note Concerning the Misnomer 'Proton X-Ray Fluorescence' and the Acronym PIXEA**
R.L. Walter

Book Review

16A **X-Rays in Atomic and Nuclear Physics**
N.A. Dyson: Reviewed by R. Jenkins

NUMBER 3 JULY 1976

117 **Editorial**

Submitted Papers

118 **A Systematic Error in Energy Dispersive Microprobe Analysis of Ni in Steel due to the Method of Background Subtraction**
S. Malm

123 **Evaluation of a Practical Background Calculation Method in X-Ray Energy Analysis**
P. Van Espen and F. Adams

129 **Determination of Copper Concentration in Aqueous and Organic Phases from Solvent Extraction Processes by X-Ray Fluorescence Spectrometry**
A.M. Harris and D.F. Baines

134 **A Correction Method for Scattered Background Intensity of Target Elements in Fluorescent X-Ray Spectrometry**
M. Murata

137 **Data Acquisition and Control of Wavelength and Energy Dispersive X-Ray Spectrometers Using a Single Minicomputer**
D.E. Leyden and J.C. Lennox Jr

142 **Empirical Matrix Corrections in Practical X-Ray Spectroscopy**
R. Plesch

149 **Concerning the Obtaining of Effective Influence Coefficients for X-Ray Spectrometric Analysis**
R. Vié le Sage and R. Tertian

154 **The Generation, Absorption and Anisotropy of Thick-target Bremsstrahlung and Implications for Quantitative Energy Dispersive Analysis**
P.J. Statham

169 **Optimum 'Windows' in Quantitative Energy Dispersive Analysis**
M.A. Short

172 **Trace Level Water Analysis by Energy Dispersive X-Ray Fluorescence**
D.T. Carlton and J.C. Russ

175 **The Use of Computers in X-Ray Fluorescence Analysis**
B. M. Gunn

NUMBER 4 OCTOBER 1976

179 **Editorial**

Submitted Papers

180 **A Description of Two Automated Control Systems for the Electron Microprobe**
M.T. Frost, K. O'Hara, P. Suddaby, G. Grant, A.F. Reid, A.F. Wilson and M. Zuiderwyk

188 **Experimental Verification of the X-Ray Absorption Correction in Aerosol Loaded Filters**
F.C. Adams and J. Billiet

194 **A Simple Dead-time Correction for X-Ray Counting Systems**
C.S. Hutchison

197 **X-Ray Methods for the Determination of the Amount of Glass Phase in Mullite Refractory Grog**
T. Knudsen

200 **Intra- and Inter-spectrometer Correction Coefficients for X-Ray Emission Spectrometric Calibration Equations**
N.H. Clark and R.J. Mitchell

204 **Die hybride Matrixkorrektur in der Röntgenspektrometrie**
R. Plesch

208 **Enhancement Effects in X-Ray Fluorescence Analysis of Rocks**
M. Franzini, L. Leoni and M. Saitta

212 **Routine Use of a Second-generation Windowless Detector for Energy-dispersive Ultra-light Element X-Ray Analysis**
J.C. Russ, G.C. Baerwaldt and W.R. McMillan

223 **The Analytical Description of the White Spectrum from a Mo X-Ray Tube**
E.E. Castellano and B.E. Rivero

Author Index 1976

Adams, F.C. 61, 123, 188

Baerwaldt, G.C. 212
Baines, D.F. 129
Barrus, D.M. 92
Billiet, J. 188
Blake, R.L. 92
Borley, G.D. 13
Brown, J.D. 36
Bullen, G. 13
Burek, A.J. 92

Caldwell, V.E. 31
Carlton, D.T. 172
Castellano, E.E. 223
Clark, N.H. 200

Eberspächer, H. 49
Enk, J.E. van den 68
Espen, P. van 123

Feather, C.E. 41
Franzini, M. 84, 208
Frost, M.T. 180

Grant, G. 180
Grieken, R.E. Van 61
Gunn, B.M. 175

Harris, A.M. 129
Hutchison, C.S. 194

Janssen, J.H. 68
Jongh, W.K. de 68

Keith, H.D. 93, 104
Knudsen, T. 197
Kondawar, V.K. 2

Lennox, J.C. 137
Leoni, L. 29, 84, 208
Leyden, D.E. 137
Loomis, T.C. 93, 104

McMillan, W.R. 212
Malm, S. 118
Mande, C. 2
Mitchell, R.J. 200
Murata, M. 134

O'Hara, K. 13, 180

Parobek, L. 36
Plesch, R. 142, 204

Reid, A.F. 180
Rivero, B.E. 223
Russ, J.C. 172, 212

Saitta, M. 29, 84, 208
Schreiber, H. 49
Short, M.A. 169
Springer, G. 88
Statham, P.J. 16, 154
Stern, W.B. 56
Suddaby, P. 180

Tertian, R. 73, 149

Vié le Sage, R. 73, 149

Walter, R.L. 115
Weber, K. 7
Willis, J. P. 41
Wilson, A.F. 180

Zuiderwyk, M. 180

XRS

Printed in Great Britain by Adlard & Son Ltd, Bartholomew Press, Dorking, Surrey